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e-pedagogy: paradigm shift yet to happen

Abstract

We consider e-pedagogy as an alternative to traditional in class instruction. E-commerce has become an essential arm in the corporate sector. In contrast, educators have failed to develop e-pedagogy as an serious component in college education or as an alternative to traditional in class instruction. We talk about reasons for this failure and opportunities ahead.

Electronic technology has caused a paradigm shift in banking, commerce and other spheres of life. We can transfer money, pay bills electronically. We can buy and sell stocks electronically.

Our students still have to come to classes to submit homework and receive instruction and take notes. A paradigm shift in college education may be waiting for us to engineer.

- First, let us warm up and look at [multimedia illustration](#).

Following is the project summary of a proposal that I wrote with Dr. Barbara Watkins, KUCE:

1. Title: *"e-pedagogy as an alternative"*.

Project Summary

This project will test and evaluate the proposition that

in this age of e-commerce, the importance of class attendance has diminished and quality instruction can be delivered and received successfully through a combination of online support and some email or in class instruction.

We do this by developing and providing detailed lecture notes with multimedia illustrations and problem solutions and with an online homework system.

We test our proposition by classifying our students in three different groups - traditional students with regular class attendance, traditional students with irregular class attendance and online distance learning students. We will evaluate differences among these groups by statistical analysis of their performance.

Traditionally regular attendance has been highly emphasized and anybody who could not maintain regular attendance (or did not have the option to do so) did not have a place in our mainstream undergraduate education. Technology gives us advanced delivery systems and tools and it is time that such students (and individuals) find their place in college education.

We derive inspiration from e-commerce. E-commerce has become an essential arm in the corporate sector. It is time that we develop e-pedagogy as an essential arm of college education.

2. My Elementary Statistics course ([Math 365](#)) and the Topics of Mathematics course ([Math 105](#)) have 3 components:
 - a. Complete lecture notes are provided online.
 - b. Provide multimedia interactive online illustrations and problem solutions. The software Flash-5 (a Macromedia product) was used to develop such animations.
 - c. An online homework system was used. The system provides instant grading and feedback and also has multiple submission option until the due date.

3. Student's Reaction:
 - a. Online Evaluation from [Math 365](#) students.
 - b. Online Evaluation from [Math 105](#) students.
 - c. Summary of survey data:

Unless Obvious, Maximum possible is 10									
	Course : Semester	Math 365 : Summer 00		Math 105 : Fall 00		Math 365 : Fall 01		Math 105 : Spring 02	
	The Question	mean	st. Dev.	mean	st. Dev.	mean	st. Dev.	mean	st. Dev
1	Student's Satisfaction Level	7.24	2.47	8.14	1.70	8.34	1.98	8.39	2.07
2	Student's Comfort Level	7.43	2.13	7.96	2.00	8.20	2.20	8.39	2.06
3	Student's Preference to Online Homework	7.55	2.22	9.18	1.32	8.44	2.28	8.47	2.00
4	Will You Receive a Better Grade?	17 YES out of 21		44 YES out of 49		43 YES out of 50		296 YES out of 342	
5	Did Your Confidence Level in Math Improved?	6.62	2.75	7.61	2.44	7.34	2.68	7.88	2.43
6	Spent More Time On Homework?	3.98	1.89	4.43	2.64	4.00	2.65	4.39	2.72
7	Spent More Time for the Course?	4.52	2.06	3.88	2.02	3.8	2.28	3.77	2.24
8	Recommend Online Homework as Standard Feature?	6.62	2.84	8.49	2.36	7.78	2.51	7.99	2.40
9	Did You Have More Fun?	6.95	2.46	8.02	2.24	7.6	2.51	8.29	2.25
10	Is Online Homework a Good Teaching/learning Tool?	7.10	2.43	8.43	1.67	8.4	1.92	8.26	2.12
11	Overall Rating regarding Online homework?	7.33	2.46	8.61	1.43	8.42	2.12	8.53	2.17

Main Discussion

1. What could happen?
2. Is it really desirable?
3. Who will do it?
4. What are the obstacles?
5. Will e-pedagogy be more expensive or less?
6. Why it is taking so long?
7. What are pros and cons?

8. What are the hopes and future?

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References

1. Regents Intellectual Property [Policy](#).